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Intravitreal Aflibercept Exposure During Early Pregnancy: A Case-Based Risk Evaluation

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Introduction:

- Aflibercept is a VEGF inhibitor used for retinal diseases (1).
- VEGF is essential in fetal vascular development.
- Poorly information about risk of aflibercept during early pregnancy (1st trimester).

VEGF in Adults	VEGF in Fetal Development
Promotes abnormal blood vessels (eye diseases)	Essential for placental and organ formation

Methods

- Retrospective study at Marmara University Teratology Information Service.

- Detailed histories, follow-ups, fetal and neonatal data collected.

Results Table of Aflibercept Use During Pregnancy

Parameter	Case 1	Case 2
Age	44 years old	34 years old
Indication	Diabetic retinopathy	Choroidal neovascularization
Aflibercept Injection Timing	Weeks 7, 10, and 17	Week 8
Comorbidities	Malignant hypertension	None reported
Medications	Perindopril, Amlodipine, etc.	None specified
Smoking Status	Heavy smoker (30–40 cigs/day until week 17)	Non-smoker
Delivery	Cesarean section at 37 weeks	Vaginal delivery at 38 weeks
Infant Outcome	Healthy baby; no malformations; normal growth (50–90th percentiles)	Healthy infant; normal birth weight and growth percentiles

Conclusion

- Animal studies show fetal toxicity, but human exposure is low after intravitreal use (2).
  - No adverse outcomes were seen in these two cases.
- The first case involved complicating factors like hypertension and drug interactions.

Implications

- Aflibercept may have lower teratogenic risk than expected (3-5).
  - More clinical data are needed to confirm safety.
- *Useful for teratology risk assessment and patient counseling.*

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